

AMENDMENTS TO THE DRAWINGS

The attached replacement drawing sheet includes Fig. 1 which has been labeled with the legend "Prior Art" as suggested in the Office Action.

REMARKS

The Office Action dated June 2, 2005, has been carefully reviewed and the foregoing amendment has been made in response thereto. Claim 2 has been canceled. Claims 1 and 3-51 are pending in the application.

The allowance of claims 10-51 is gratefully acknowledged.

The requirement for corrected drawing is respectfully traversed. In accordance with the requirement of the Office Action, Figure 1 has been labeled "Prior Art" on a replacement sheet. Approval of the replacement drawing is respectfully solicited.

The rejection of claim 1 under 35 USC 102(b) as being anticipated by Finn (WO 98/56208) is respectfully traversed. Claim 1 has been amended to recite that the speech enhancement filter removes the second component by processing the audio signal by a method responsive to the way the human ear perceives sound at different frequencies on a non-linear mel-scale. Claim 1 has incorporated limitations formerly found in claim 2 which was rejected in the Office Action under 35 USC 103(a) based on Finn in view of Cheng et al. Therefore, the rejection under 35 USC 103(a) will be considered below as though directed toward claims 1, 3, and 4.

The rejection of claims 1, 3, and 4 under 35 USC 103(a) as being unpatentable over Finn in view of Cheng et al is respectfully traversed. As noted in the Office Action, Finn does not teach psychoacoustics. Thus, Finn fails to teach or suggest a speech enhancement filter that removes the noise component by processing the audio signal by a method responsive to the way the human ear perceives sound.

Cheng et al fails to complete a case of prima facie obviousness. The invention recited in claim 1 enhances speech for outputting a clarified voice from the loudspeaker. In contrast, Cheng et al processes sound from a microphone to remove noise to improve performance by electronic speech recognition systems that receive the filtered signal. The way the human ear perceives sound is not relevant to the accuracy of a speech recognition system since the electronic system is not limited according to the physiology of the human auditory system. The filters described by

Cheng et al have a structure that is intended to remove noise that would affect a speech recognizer, a device that uses signal matching algorithms to detect spoken words. The speech recognizer does not “hear” sounds the way the human ear perceives sounds at different frequencies. Therefore, adding the filters shown by Cheng et al to the system of Finn would fail to achieve the function of claim 1.


Furthermore, there is no motivation to combine Cheng et al with Finn. Finn outputs amplified speech through a loudspeaker to persons in the cabin. There is nothing in Cheng et al to suggest that its filtering techniques that are intended to operate with electronic speech recognition systems would be beneficial for outputting amplified speech to be heard by the human ear. Therefore, claims 1, 3, and 4 are allowable over the cited references.

The rejection of claims 5-7 under 35 USC 103(a) as being unpatentable over Finn in view of Cheng et al and further in view of Nelson et al is respectfully traversed. Nelson et al fails to correct for the deficiencies in the rejection against claim 1. Therefore, claims 5-7 are likewise allowable.

The rejection of claims 8 and 9 under 35 USC 103(a) as being unpatentable over Finn in view of Cheng et al and further in view of Johnson is respectfully traversed. Johnson fails to correct for the deficiencies in the rejection against claim 1. Therefore, claims 8 and 9 are likewise allowable.

In view of the foregoing amendment and remarks, claims 1 and 3-51 are now in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Mark L. Mollon", written over a horizontal line.

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Annotated Sheet

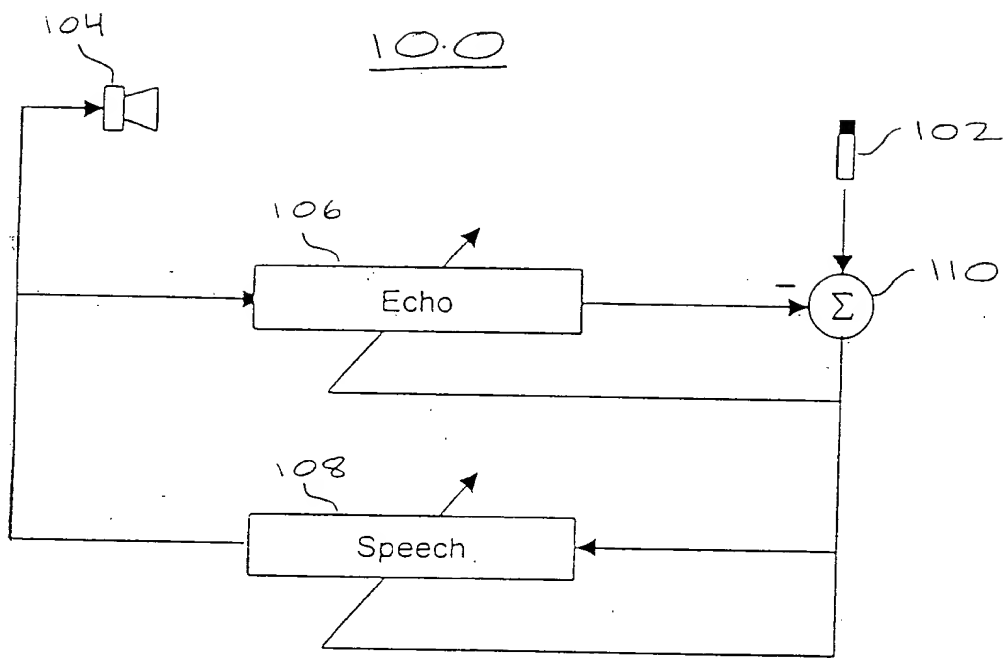


Fig. 1

(Prior Art)

ADDED